

REMARKS

Claims 1, 2, 5, 7-19, 21, 22, 24-40, 42, and 43 are pending in the application. Claims 1, 21, and 42 are amended, and the amendments are supported by the specification as filed at page 6, lines 5-8, and page 18, line 31, through page 19, line 4, and by claim 20 as originally filed. Applicants respectfully request consideration of the application in view of the foregoing amendments and the following remarks.

Applicants thank Examiner Aughenbaugh for granting a telephonic interview to Applicants' representative on April 19, 2005. No agreement on specific claim language was reached during the interview. However, Examiner Aughenbaugh agreed that a negative limitation regarding inclusion of colorant in the microbeads, or changing to closed claim language ("consisting of") regarding the microbead composition, if supported by the specification, and inclusion of the subject matter of original claim 20, would differentiate Applicants' claimed invention from at least the cited reference of Narita et al., and its combination with Maier et al. Further details of the interview are reflected in the above amendments and the following remarks.

35 USC §103(a) over Maier et al. in view of Narita et al.

Claims 1, 2, 5, 7, 9-19, 21, 22, 24-26, and 28-39 have been rejected under 35 USC §103(a) over Maier et al. in view of Narita et al. Claims 8 and 27 have been rejected under 35 USC §103(a) over Maier et al. in view of Narita et al., and further in view of Saito et al. Claim 40 has been rejected under 35 USC §103(a) over Maier et al. in view of Narita et al., and further in view of Hart et al. For at least the following reasons, Applicants traverse each and every rejection.

Independent claims 1 and 21, from which all other rejected claims depend, are directed to shaped articles comprising a continuous first polymer phase having dispersed therein microbeads of a cross-linked second polymer, wherein the microbeads are free of colorant. The microbeads are thermally stable, defined as having a 2% weight loss above 270°C, and have a change in CIELAB b* toward yellowness less than or equal to 0.2 on exposure to UV light of 50 Klux for one week.

As set forth in the specification at page 7, lines 25-26, "suitable cross-linked second polymers useful for the microbeads are those that provide both improved yellowing and thermal stability." The problem that the invention

addresses is the known yellowing of styrenic materials when exposed to UV light. As known to those skilled in the art, styrenic materials yellow over time due to the increased cross-linking of the styrenic monomers on exposure to UV light. Addition of colorants such as pigments to styrenic materials can change the apparent color of the styrenic material, but the colored material still experiences an overall shift in yellowness over time due to the yellowing of the styrenic material. Addition of colorants such as pigments or dyes to the styrenic material does not prevent the shift in yellowness from occurring, but may help mask the yellowing.

Applicants invention is recognizing and setting forth that an acrylic-containing material free of colorants and with a minimal amount (less than 10% by weight) of styrenic monomers does not experience the yellowing of styrenic monomer-containing materials, and also has improved thermal stability as compared to such styrenic-monomer containing materials.

The Office Action references the arguments set forth by the Examiner in the Office Action dated August 4, 2004, which in turn references the arguments set forth in the March 29, 2004 Office Action. It is admitted by the Patent Office at page 4 of the Office Action mailed March 29, 2004, that Maier et al. "fail to explicitly teach that the microbeads have a change in CIELAB value b^* towards yellowness on exposure to UV light wherein the change in b^* is less than or equal to 0.2." Further, there is no specific teaching or suggestion that the materials of Maier et al. have a 2% weight loss above 270°C, as required by the claimed invention.

Narita et al. is relied on for a teaching of incorporation of a colorant into the dye receptor layer of a thermal transfer-receiving sheet. In particular, a white pigment is included to impart screenability of a background or white color to the dye receptor layer. *See* col. 10, lines 19-20. Other colorants can also be added, as taught at col. 10, lines 36-44, to produce a desired color in the thermal transfer-receiving sheet such that the sheet mimics the look of a certain paper, allowing the sheet to be used for proofing. Narita et al. does not teach or suggest the use of microbeads. Narita et al. does not teach, disclose, or suggest that a change in CIELAB value b^* towards yellowness on exposure to UV light of the receiving sheet over any period of time is less than or equal to 0.2,

as claimed by Applicants. Narita et al. expressly teaches control of color of a polymeric material through the use of colorants.

The Patent Office combines the references of Maier et al. and Narita et al. to provide a thermal transfer-receiving sheet having microbeads containing colorants to control b^* , wherein the microbeads allegedly have a thermal stability such that the microbeads experience a 2% weight loss above 270°C. Applicants note this combination of references requires b^* be evaluated against a control sheet the thermal receiver is intended to mimic, as taught by Narita et al., and requires the use of colorants in the microbeads to control b^* .

Combining Maier et al. and Narita et al. as suggested by the Patent Office would not result in the claimed invention. Neither reference teaches, discloses, or suggests an acrylic-containing microbead free of colorant and containing less than 10% by weight styrene monomers having a change in CIELAB b^* toward yellowness less than or equal to 0.2 on exposure to UV light of 50 Klux for one week, while also having increased thermal stability such that the microbead experiences a 2% weight loss above 270°C. Maier et al. in view of Narita et al. therefore does not disclose or suggest the subject matter of the claimed invention.

Neither of the tertiary references of Saito et al. nor Hart et al. cure the deficiencies of Maier et al. and Narita et al. Thus, none of the references, taken alone or in any combination, disclose or suggest the subject matter of the claimed invention as set forth in any of claims 1, 2, 5, 7-19, 21, 22, and 24-40. Reconsideration and withdrawal of the rejections are in order, and are respectfully requested.

35 USC §103(a) over Maier et al. in view of Harrison et al.

Claims 42 and 43 have been rejected under 35 USC §103(a) over Maier et al. in view of Harrison et al. and in further view of Narita et al. For at least the following reasons, Applicants traverse the rejection.

As discussed above, neither Maier et al. nor Narita et al., taken alone or in combination, teach, disclose, or suggest an acrylic-containing microbead free of colorant and having a change in CIELAB b^* toward yellowness less than or equal to 0.2 on exposure to UV light of 50 Klux for one week, while also having increased thermal stability such that the microbead experiences a 2% weight loss above 270°C.

Harrison et al. is cited in the Office Action of August 4, 2004, for teaching a dye diffusion thermal transfer dye receiving element "comprising a continuous oriented polymer matrix having dispersed therein microbeads of a cross-linked polymer which are at least partially bordered by void space" (see page 5 of the Office Action mailed August 4, 2004). It is not suggested by the Patent Office that Harrison et al. teaches more than a thermal receiver, or that Harrison overcomes the deficiencies of Maier et al. or Narita et al. Applicants submit Harrison et al. does not overcome the deficiencies of Maier et al., or the combination of Maier et al. and Narita et al., and does not teach or suggest microbeads free of colorant have a change in CIELAB value b^* towards yellowness on exposure to UV light of 50 Klux for one week less than or equal to 0.2, wherein the microbeads also have increased thermal stability such that the microbeads experience a 2% weight loss above 270°C.

No combination of the cited references of Maier et al., Harrison et al., and Narita et al. discloses or suggests styrenic microbeads having a change in CIELAB value b^* towards yellowness on exposure to UV light of 50 Klux for one week less than or equal to 0.2 while also having increased thermal stability such that the microbead experiences a 2% weight loss above 270°C. Reconsideration and withdrawal of the rejection are in order and are respectfully requested.

Applicants submit all pending claims 1, 2, 5, 7-19, 21, 22, 24-40, 42 and 43 are in condition for allowance for at least the reasons set forth herein. Prompt and favorable action in the form of a Notice of Allowance are respectfully solicited. Should the Examiner have any questions or require anything further, the Examiner is invited to contact Applicants' undersigned representative.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.